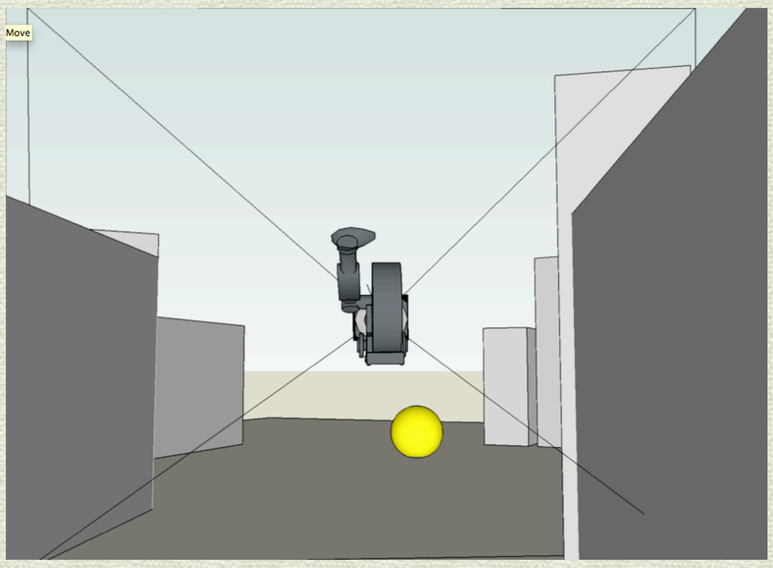
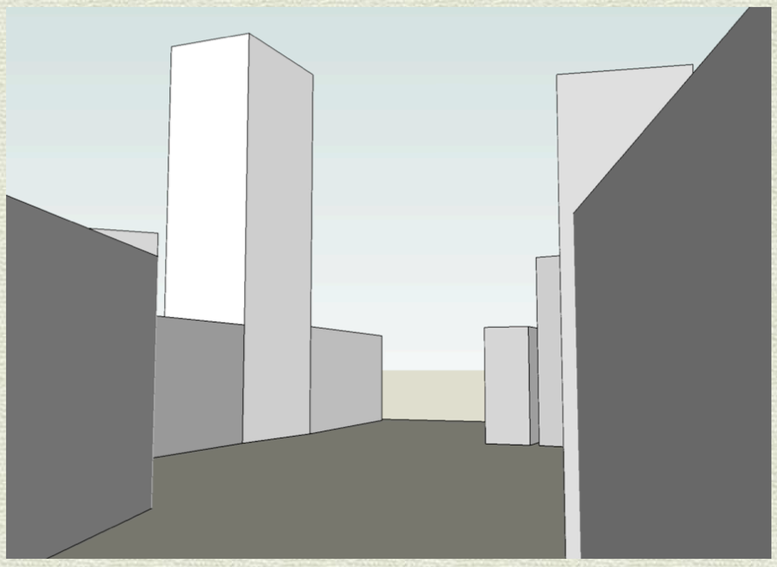
Architectural Models in Urban Landscapes
Synthesis of Marker and Landscape

The spherical marker or simply the ball
- marks a POI in a landscape.
- is a fiduciary feature.
- presents lighting references.

Synthesis of real world and virtual model
Technical principles and schematic view of the system.



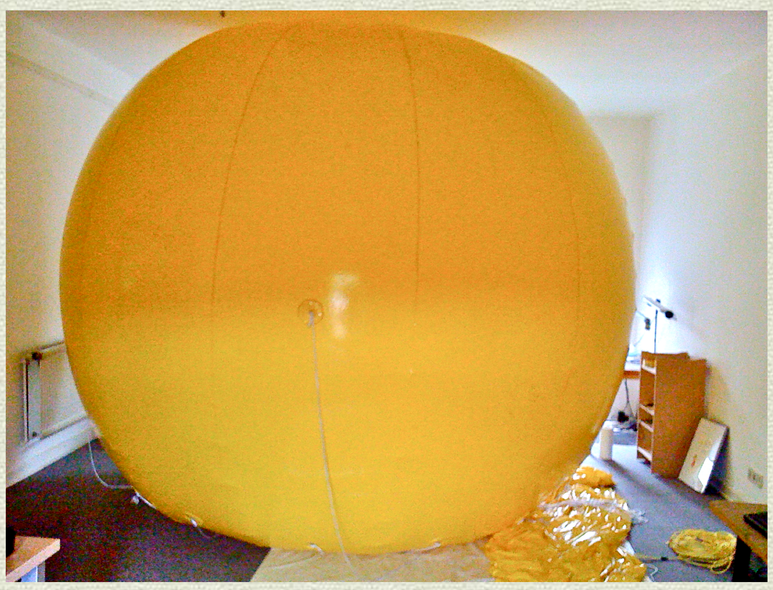


Requested features:
- The marker provides only one single feature, its size
- It is both physically and optically tracked.
- The position of a camera must be tracked.

Benefits (as ball or balloon)
- The diameter from all sides is always the same.
- The size of the marker has (almost) no constraints.
- The Marker is flexible and deployable.
- Cameras may have a flexible focal length (zoom cameras)

Some physical Representations

Large scale inflatable marker



First prototype

References

1. Anders, P. and Lonsing, Werner: AmbiViewer: A Tool for Creating Architectural Mixed Reality, in: Smart Architecture [ACADIA 2005 Conf. Proc.] Savannah, GA, 2005.
2. Klein, Yves: Le Saut dans le Vide (Leap into the Void). Photo. Fontenay-aux-Roses, France November, 27th 1960.
3. Lonsing, Werner: Augmented Reality as Tool in Architecture, 495-499, eCAADe, Copenhagen, Denmark 2004.
4. Lonsing, Werner: Composite Images on Mobile Devices Augmenting Reality in an Outdoor Environment. ACADIA, Chicago, IL 2009.
5. Lonsing, Werner and Drescher, Stephan: HotPOI, Locative Exhibitions on Mobile Devices. IE Wellington, NZ 2010.
6. U.S. Patent No. 7,391,424.
7. Pierkarski, W., Gunther, B. and Thomas, B.: Integrating Virtual and Augmented Realities in an Outdoor Application, 45-54, IWAR, IEEE, Washington DC 1999.

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